



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,929	04/14/2006	Klaus Schultes	285437US0PCT	7074
22850	7590	06/04/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
REDDY, KARUNA P				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
06/04/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

Office Action Summary

Application No.

10/575,929

Applicant(s)

SCHULTES ET AL.

Examiner

KARUNA P. REDDY

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 3/12/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/14/2008 has been entered.

Claims 1-23 are cancelled; and claims 24, 27-30, 33 are amended. Claims 24-47 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

Art Unit: 1796

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 24-26, 28-31, 33-40 and 42 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 6-12 of copending Application No. 11/813,946 in view of Lichtenstein et al (US 5, 621, 028). Although the conflicting claims are not identical, they are not patentably distinct from each other because both are directed to a polymer mixture comprising a low-molecular-weight (meth)acrylate (co)polymer; an impact modifier; and a relatively high-molecular-weight (meth)acrylate (co)polymer.

Copending application No. 11/813,946 is silent with respect to plastic particles.

However, Lichtenstein et al teach polymethacrylate molded articles with polystyrene as light-scattering agent to render them translucent rather than transparent

(column 1, lines 13-15). The polymer particles are spherical in shape having a diameter of 1-20 μm and generally present in an amount of 0.05 to 10 wt% (column 3, lines 3-7). Therefore, it would have been obvious to add the crosslinked polystyrene of Lichtenstein et al, to the copending application for obtaining a translucent molded article.

This is a provisional obviousness-type double patenting rejection.

Claim Objections

5. Claims 30-38 and 40 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

It appears that claim 30 is not properly dependent on claims 24. Thus, use of transitional phrase "comprising" to define the components of polymer matrix is broader than the use of transitional phrase "consisting essentially of" in independent claim 24 on which claim 30 is dependent. Furthermore, while the independent claim 24 restricts (meth)acrylate (co)polymer to have a Vicat softening point of at least 104⁰C, the dependent claim 30 is open to a (meth)acrylate (co)polymer with any Vicat softening point. In addition, neither of the limitations - constituents a) and b) of the polymer mixture is "introduced individually" or "in the form of a compounded material" is encompassed by the polymer.

Claims 31-38 and 40 are subsumed by this rejection because of their dependence on claim 30.

Claim Rejections - 35 USC § 103

6. Claims 24-25, 30, 32, 35, 37, 39, and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Lichtenstein et al (US 5,621, 028).

Kress et al disclose a thermoplastic molding material containing (B) 10 to 60 parts by weight of one or more graft polymers and read on impact modifier of present claims, (C) 10 to 70 parts by weight of a thermoplastic copolymer having an intrinsic viscosity of 20 to 110 ml/g and formed from (C.1) 50 to 95% by weight of styrene, methyl methacrylate or mixtures thereof and (C.2) 50 to 5% by weight of methyl methacrylate, maleic anhydride or mixtures thereof and (D) 0.5 to 7.5 parts by weight of a copolymer formed from (D.1) 0 to 90% by weight of styrene, methyl methacrylate or mixtures thereof and (D.2) 100 to 10% by weight of methyl methacrylate, maleic anhydride or mixtures thereof and component (D) has an intrinsic viscosity of 2 to 10 ml/g (column 1, lines 7-46). Components C and D read on the mixture of (meth)acrylate copolymers of claim 24 and 30. It is noted that viscosity is a function of molecular weight of the polymer and can be regulated with chain transfer agent and within the scope of a skilled artisan.

Kress et al also disclose that alkyl acrylate rubbers based on C₁-C₈ alkyl acrylates, in particular ethyl, butyl or ethylhexyl acrylate, are suitable as graft polymers. These alkyl rubbers can contain in the copolymerized form monomers such as methyl methacrylate. These alkyl acrylate rubbers can also contain minor amounts of ethylenically unsaturated monomers which have a crosslinking action (column 4, lines 53-65).

The mixtures may contain customary additives such as mould releasing agents (column 6, lines 46-47). The molding material can be used to produce shaped articles by injection molding. Examples of shaped articles for example include house hold equipment, components for automotive industry, computer casing and the molding material is also employed in the field of electrical engineering (column 7, lines 1-10)

Kress et al is silent with respect to plastics particles of claim 24, and properties of the composition in claims 24, 30 and 44-45.

However, Lichtenstein et al teach polymethacrylate molded articles with polystyrene as light-scattering agent to render them translucent rather than transparent (column 1, lines 13-15). The polymer particles are spherical in shape having a diameter of 1-20 μm and generally present in an amount of 0.05 to 10 wt% (column 3, lines 3-7). Therefore, it would have been obvious to add the light scattering agent, such as polystyrene, of Lichtenstein et al, to the molding material of Kress et al for obtaining a polymer mixture that can be molded into a translucent article.

As to the properties recited in claims 24, 30 and 44-45, in light of the fact that the composition comprises substantially similar monomers and wt% as that of the instant invention, one of ordinary skill in the art would have a reasonable basis to believe that the composition would exhibit similar properties. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977). Furthermore, when the claimed compositions are not novel they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in the prior art. See *In re Spada*, 911 F. 2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990).

7. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Lichtenstein et al (US 5, 621, 028) as applied to claim 24 above, and further in view of Parker (US 5, 252, 667).

The discussion with respect to Kress et al in view of Lichtenstein et al in paragraph 5 is incorporated here by reference.

Kress et al in view of Lichtenstein et al is silent with respect to pelletized form of the moulding composition.

However, it is well known in the art of injection moulding to pre-extrude polymer blends to form pellets (column 8, lines 15-18) as taught by Parker. It is noted that a pellet is easier to transport and store as opposed to a powder or liquid. Therefore, it would have been obvious to one skilled in the art at the time invention was made to pre-extrude the polymer blends of Kress et al in view of Lichtenstein et al to form pellets, motivated by expectation of success and derive the ability to transport and store easily.

8. Claims 24-26, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albrecht (US 4, 833, 221) in view of Suetterlin et al (US 4, 513, 118) and Lichtenstein et al (US 5, 621, 028).

Albrecht discloses a thermoplastic molding composition comprising 60 to 90 percent by weight of methyl methacrylate, from 5 to 25 percent by weight of at least one aromatic vinyl compound; and 2.5 to 15 percent by weight of maleic anhydride (column 1, lines 47-54). See table 1 wherein percent by weight of methyl methacrylate, styrene and maleic anhydride is 74%, 16% and 10% by weight respectively and the polymer has a Vicat softening point of at least 104°C.

Albrecht is silent with respect to impact modifier based on crosslinked poly(meth)acrylates, plastics particles based on polymethyl methacrylate, polystyrene or polysilicones and the properties associated with test specimen.

However, Suetterlin et al teach an emulsion polymer, said polymer being useful as an impact strength modifying agent which, in admixture with a thermoplastic molding compound yields molded articles exhibiting reduced susceptibility to stress whitening and improved impact strength (abstract). The basic structure of polymers comprises a hard, nonelastomeric core, an elastomeric intermediate stage and a hard nonelastomeric final stage. The polymers of intermediate and final stage are disposed about the core in the manner of a shell (column 1, lines 14-19). The preferred field of use of the impact strength modifying agent is its admixture with molding composition comprising a copolymer of 50 to 99% by weight of methyl methacrylate and 1 to 50% by weight of other ethylenically unsaturated monomers. The amount of impact modifying agent is about 10 to 80 percent by weight (column 6, lines 27-40). Furthermore, Lichtenstein et al teach polymethacrylate molded articles with polystyrene as light-scattering agent to render them translucent rather than transparent (column 1, lines 13-15). The polymer particles are spherical in shape having a diameter of 1-20 μm and generally present in an amount of 0.05 to 10 wt% (column 3, lines 3-7). Therefore, it would have been obvious to add the impact modifier polymer of Suetterlin et al and crosslinked polystyrene of Lichtenstein et al, to the molding material of Albrecht et al for above mentioned advantages.

9. Claims 33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Lichtenstein et al (US 5, 621, 028) as applied to claims 32 and 35 above, and further in view of Albrecht (US 4, 833, 221).

The discussion with respect to Kress et al in view of Lichtenstein et al in paragraph 5 is incorporated herein by reference.

Kress et al in view of Lichtenstein et al differs with respect to the copolymer.

However, Albrecht teaches a thermoplastic molding composition comprising 60 to 90 percent by weight of methyl methacrylate, from 5 to 25 percent by weight of at least one aromatic vinyl compound; and 2.5 to 15 percent by weight of maleic anhydride (column 1, lines 47-54). See table 1 wherein percent by weight of methyl methacrylate, styrene and maleic anhydride is 74%, 16% and 10% by weight respectively and the polymer has a Vicat softening point of at least 104°C and viscosity less than 55 ml/g in several examples. Molding compositions comprising these components are distinguished by a higher heat distortion point and a lower susceptibility to stress cracking than are polymethyl methacrylate molding compositions (column 1, lines 9-13). Therefore, it would have been obvious to use a copolymer of methyl methacrylate, styrene and maleic anhydride in the said weight percentages because Kress et al disclose a copolymer of methyl methacrylate, and maleic anhydride or styrene and Albrecht teaches that a copolymer of all three monomers in the said percentages results in a molding composition that has higher heat distortion point and a lower susceptibility and one of ordinary skill in the art would expect such a copolymer to work in the composition of Kress et al in view of Lichtenstein et al to yield a molding composition that has higher heat distortion point and a lower susceptibility.

10. Claims 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Lichtenstein et al (US 5, 621, 028) as applied to claim 30 above, and further in view of Suetterlin et al (US 4, 513, 118).

The discussion with respect to Kress et al in view of Lichtenstein et al in paragraph 5 is incorporated herein by reference.

Kress et al in view of Lichtenstein et al differs with respect to the impact modifier having a two- or three shell structure; and the copolymerization of 95 to 99.5% by weight of methyl methacrylate with 0.5 to 5% by weight of methyl acrylate, ethyl acrylate and/or butyl acrylate.

However, Suetterlin et al teach an emulsion polymer, said polymer being useful as an impact strength modifying agent which, in admixture with a thermoplastic molding compound yields molded articles exhibiting reduced susceptibility to stress whitening and improved impact strength (abstract). The basic structure of polymers comprises a hard, nonelastomeric core, an elastomeric intermediate stage and a hard nonelastomeric final stage. The polymers of intermediate and final stage are disposed about the core in the manner of a shell (column 1, lines 14-19). The preferred field of use of the impact strength modifying agent is its admixture with molding composition comprising a copolymer of 50 to 99% by weight of methyl methacrylate and 1 to 50% by weight of other ethylenically unsaturated comonomers such as alkyl esters of acrylic acid having from 1 to 8 carbon atoms. The amount of impact modifying agent is about 10 to 80 percent by weight (column 6, lines 27-40). Therefore, it would have been obvious to add the impact modifier of Suetterlin with a core-shell structure to the polymer mixture comprising a copolymer of methyl methacrylate and a comonomer in said amounts, because court held that it is prima facie obvious to combine two ingredients, each of

which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506,509, 173 USPQ 356, 359 (CCPA 1972).

11. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Lichtenstein et al (US 5, 621, 028) and Suetterlin et al (US 4, 513, 118) as applied to claim 38 above, and further in view of NieSsner et al (US 2001/0007890 A1).

The discussion with respect to Kress et al in view of Lichtenstein et al and Suetterlin et al in paragraph 9 above is incorporated here by reference.

Kress et al in view of Lichtenstein et al and Suetterlin et al is silent with respect to the addition of mold release agents such as stearyl alcohol.

However, NieSsner et al teach the addition of additives such as lubricants and mold releasing agents (paragraph 0106) to molding compositions of styrene comprising comonomers such as methyl methacrylate, maleic anhydride (paragraph 0019 – 0024). Examples of suitable lubricants and mold releasing agents are stearyl alcohol (paragraph 0107). Therefore, it would have been obvious to add lubricants and mold releasing agents such as stearyl alcohol to the composition of Kress et al in view of Lichtenstein et al because NieSsner et al has proven successfully the addition of lubricants and mould release agents such as stearyl alcohol to molding composition and one of ordinary skill in the art would expect the addition of lubricants and mould release agents such as stearyl alcohol to work for the molding composition of Kress et al in view of Lichtenstein et al and Suetterlin et al, motivated by expectation of success.

12. Claims 24, 26-27 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhein et al (EP 0 691 351 A1) in view of Suetterlin et al (US 4,513,118) and Lichtenstein et al (US 5, 621, 028).

Rhein et al disclose thermoplastic acrylic moulding material obtained by polymerizing a mixture of MMA and lower alkyl acrylate. It enables the production of PMMA-based molding materials with improved properties, especially higher Vicat softening point (abstract). See example 1, wherein the Vicat softening temperature is 112°C.

Rhein et al is silent with respect to impact modifier based on crosslinked poly(meth)acrylates, plastics particles based on polymethyl methacrylate, polystyrene or polysilicones and the properties associated with test specimen.

However, Suetterlin et al teach an emulsion polymer, said polymer being useful as an impact strength modifying agent which, in admixture with a thermoplastic polymethyl methacrylate molding compound yields molded articles exhibiting reduced susceptibility to stress whitening and improved impact strength (abstract). Furthermore Lichtenstein et al teach polymethacrylate molded articles with polystyrene as light-scattering agent to render them translucent rather than transparent (column 1, lines 13-15). The polymer particles are spherical in shape having a diameter of 1-20 µm and generally present in an amount of 0.05 to 10 wt% (column 3, lines 3-7). Therefore, it would have been obvious to add the impact modifier polymer of Suetterlin et al and crosslinked polystyrene of Lichtenstein et al, to the molding material of Rhein et al, for above mentioned advantages.

As to the properties recited, given that the composition comprises substantially similar components, one of ordinary skill in the art would have a reasonable basis to

believe that the composition would exhibit similar properties. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977). Furthermore, when the claimed compositions are not novel they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in the prior art. See *In re Spada*, 911 F. 2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990).

Allowable Subject Matter

13. Claim 31 is allowed over the prior art, pending a filing of terminal disclaimer to overcome the obviousness-type double patenting rejection over copending application No. 11/813,946, for the following reasons -

It is noted that present claim 31 is directed to a mixture of polymers comprising

d) 25 to 75% by weight of a low molecular weight (meth)acrylate (co)polymer, characterized by a solution viscosity of smaller than or equal to 55 ml/g;

e) 10 to 60% by weight of an impact modifier based on crosslinked poly(meth)acrylates;

f) a relatively high molecular weight (meth)acrylate (co)polymer characterized by a solution viscosity of smaller than or equal to 65 ml/g; and/or

g) a (meth)acrylate (co)polymer other than d) characterized by a solution viscosity of 50 to 55 ml/g;

wherein f) and/or g) is present in amount of 10 to 50% by weight;

Art Unit: 1796

and each of the components d), e), f) and/or g) may be individual polymers or a mixture of polymers wherein d), e), f) and/or g) give a total of 100% by weight;

from 1 to 15% by weight of plastics particles composed of crosslinked polymers based on polymethyl methacrylate, on polystyrene and/or polysilicones, with a median particle size of 1 to 30 microns;

and optionally conventional additives, auxiliaries and/or fillers wherein a test specimen has the following properties:

a tensile modulus (ISO 527) of at least 2600 MPa;

a Vicat softening point (ISO 306-B50) of at least 109°C;

an impact strength (ISO 179-2D, flatwise) of at least 17 kJ/m²; and

a melt index (ISO 1133, 230°C/3.8 kg) of at least 1.5 cm³/10 min.

The closest prior art, viz., Kress et al (US 4, 895,898) and Lichtenstein et al (US 5, 621, 028), taken individually or in combination, do not disclose or suggest a polymer blend comprising (meth)acrylate copolymer having the said viscosity in above mentioned amount. Thus, Kress et al disclose a blend of polymers comprising 10 to 60 parts by weight of crosslinked polyacrylate rubbers (an impact modifier); 10 to 70 parts by weight of a thermoplastic copolymer (having an intrinsic viscosity of 20 to 110 ml/g) formed from 50 to 95% by weight of styrene, methyl methacrylate or mixtures thereof and 50 to 5% by weight of methyl methacrylate, maleic anhydride or mixtures thereof; and 0.5 to 7.5 parts by weight of a copolymer (has an intrinsic viscosity of 2 to 10 ml/g) formed from 0 to 90% by weight of styrene, methyl methacrylate or mixtures thereof and 100 to 10% by weight of methyl methacrylate, maleic anhydride or mixtures thereof (column 1, lines 7-

46), and Lichtenstein teaches polymethacrylate molded articles with polystyrene as light-scattering agent to render the molded articles translucent rather than transparent.

Response to Arguments

14. Applicant's arguments filed 4/14/2008 have been fully considered but they are not persuasive. Specifically, applicant argues that (A) the composition disclosed by Kress et al has four components with the amount of thermoplastic polycarbonate ranging from 20-80 parts by weight and the present claims do not contain such as a fundamentally different thermoplastic polycarbonate; (B) while rubber material would function as an impact modifier, no such rubbery material is a component of the polymer matrix of the present composition; (C) the mixture of three distinct polymer materials of Kress et al i.e. A, B and C do not suggest any of the four polymer matrix materials (i), (ii), (iii) and (iv) of the present invention; (D) the copolymer D is an adjunct to the primary mixture of components (A), (B) and (C); (E) examiner contends with respect to Kress et al that matrix "a" of claim 24 read on components (B), (C) and (D); (F) applicants maintain their position that no (meth)acrylamide based polymers are taught by Kress et al; (G) while it is granted that methyl methacrylate is disclosed as a possible monomer in both of (C.1) and (c.2), there is no disclosure of the Vicat softening point of at least 104⁰C; (H) there is no motivation to add the impact modifier of Suetterlin et al to the composition disclosed in Kress et al; (I) no motivation to substitute the impact modifier i.e. graft polymer of Kress et al with the impact modifier of Suetterlin; (J) because of the substantial differences between the relatively simple homo- or co-polymer of methyl methacrylate disclosed in Lichtenstein et al and that of present claims, the combined

teachings of Kress et al with Lichtenstein would not yield the present claims; (K) Rhein et al does not suggest one of the four types of polymer materials identified in the present claims that have a Vicat softening point of at least 104°C; (L) Liebler et al does not disclose or suggest a moldable (meth)acrylate composition that contains a particulate plastic material and an impact modifier.

With respect to (A), it is the examiner's position that while use of transitional phrase "consisting essentially of" narrows scope of the polymer matrix to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, "consisting essentially of" is construed as equivalent to "comprising". Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. polycarbonate, would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant's invention. See MPEP 2111.03. Moreover, the statement "present claims do not contain fundamentally different thermoplastic polycarbonate" in applicant's invention is a conclusory statement with no evidentiary weight, i.e., attorney's statements are not a substitute for factual evidence. Case law holds that "[i]f an applicant contends that additional steps or material in the prior art are excluded by the recitation of 'consisting essentially of,' applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention." *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). Applicant is advised to submit clear and convincing evidence in the form of a declaration that presence of thermoplastic polycarbonate would materially affect the basic and novel characteristics of applicant's invention. In addition, the present claims are directed to a "polymer mixture" and use of

transitional phrase "comprising" to describe the "polymer mixture" is open-ended and can include other component such as polycarbonate in an amount of 20-80 percent weight.

With respect to (B), claims as recited do not exclude graft polymers as impact modifiers. The present claims only require impact modifier to be a crosslinked poly(meth)acrylate that is not covalently bonded to the polymer matrix. The acrylate rubber materials disclosed in Kress et al are crosslinked and not bonded to other polymers in the mixture.

With respect to (C), it is the examiner's position that components C and D of Kress et al read on the (meth)acrylate copolymers of present claims.

With respect to (D), it is the examiner's position it meets the claim limitation of the present claims of a mixture of (meth)acrylate copolymers because there is no restriction on the amount of each (meth)acrylate copolymer in the polymer mixture of rejected claims.

With respect to (E), it is moot in view of the new grounds of rejection.

With respect to (F), examiner maintains that (meth)acrylimide (co)polymer or its mixtures with (meth)acrylate polymer is not required and is only an alternative component for the polymer matrix.

With respect to (G), court held that when the claimed compositions are not novel they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in the prior art. See *In re Spada*, 911 F. 2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990).

With respect to (H) and (I), ample motivation to combine the references is presented in the rejections.

Art Unit: 1796

With respect to (J) and (L), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With respect to (K), attention is drawn to example 1 of Rhein et al wherein it is disclosed that (meth)acrylate polymer has a Vicat softening point of 112°C.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Art Unit: 1796

Customer Service Representative or access to the automated information system, call
800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karuna P Reddy/
Examiner, Art Unit 1796

/VASUDEVAN S. JAGANNATHAN/
Supervisory Patent Examiner, Art Unit 1796